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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,490	12/17/2003	Xin Du	3009	1489
31424	7590	02/16/2005	EXAMINER	
BABCOCK IP LLC 24154 LAKESIDE DRIVE LAKE ZURICH, IL 60047			NGUYEN, HOANG V	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/707,490	<b>Applicant(s)</b> DU, XIN	
	<b>Examiner</b> Hoang V. Nguyen	<b>Art Unit</b> 2821	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,9,13-16 is/are rejected.
- 7) ☒ Claim(s) 2-8 and 10-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/17/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation “the antenna element spaced away from the ground plane by a dielectric spacer” must be shown or the feature(s) canceled from the claim(s). The drawings only show that the sleeve is spaced away from the ground plane by a dielectric spacer. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Examiner cannot determine whether applicant is claiming that “the antenna element” or “the sleeve” is being spaced away from the ground plane by a dielectric spacer. The drawing only shows that the sleeve is being spaced away from the ground plane by a dielectric spacer. Clarification/correction required.

Claims 14-16 are rejected for depending on claim 13.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Hope (US 6,034,648).

Regarding claim 1, Hope (Figure 1) discloses an antenna comprising an antenna element 3 extending from a ground plane 16/17, the antenna element electrically isolated from the ground plane; and a tubular sleeve 5 electrically isolated from the ground plane and coaxial with the antenna element.

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Regarding claim 9, as applied to claim 1, Figure 1 of Hope shows that the antenna element 3 is the inner conductor 15 of a coaxial cable 14 extending through an aperture in the ground plane; and an outer conductor 13 of the coaxial cable is coupled to the ground plane.

*Allowable Subject Matter*

6. Claims 2-8 and 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 13-16 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 2-4, Hope discloses an antenna comprising an antenna element extending from a ground plane, the antenna element electrically isolated from the ground plane; and a tubular sleeve electrically isolated from the ground plane and coaxial with the antenna element. Hope, however, fails to further teach a dielectric spacer located between the ground plane and the sleeve.

Regarding claims 5 and 6, Hope fails to specifically teach, among other features, that an outer diameter of the antenna element and an inner diameter of the sleeve are selected to create a desired sleeve-antenna element capacitive coupling.

Regarding claims 7 and 8, Hope fails to specifically teach, among other features, that the ground plane is a radiating element of a second antenna.

Regarding claim 10, Hope fails to specifically teach, among other features, that the dual non-harmonically related frequency bands are 802.11a and 802.11b/g Wi-Fi frequency bands.

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Regarding claim 11, Hope fails to specifically teach, among other features, that the dual non-harmonically related frequency bands are a low frequency band and a high frequency band; wherein the high frequency band being more than double the frequency of the lower frequency band.

Regarding claim 12, Hope fails to specifically teach, among other features, that the antenna element extends less than 35mm from the ground plane.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patent 3,293,646 discloses a coaxial-stub antenna.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang V. Nguyen whose telephone number is (571) 272-1825. The examiner can normally be reached on Mondays-Fridays from 9:00 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoang Nguyen can be reached on (571) 272-1825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Hvn

2/14/05

A handwritten signature in black ink, appearing to read 'Hoang V. Nguyen', with a long horizontal stroke extending to the right.

**HOANG V. NGUYEN  
PRIMARY EXAMINER**